

## **REMARKS**

The Applicants acknowledge receipt of the Office Action dated March 26, 2003 in which the Examiner rejected claims 1-8 under 35 U.S.C. § 102(b) as being anticipated by *Hatayama* (JP 09033447A), rejected claims 9-11 and 13-16 under 35 U.S.C. § 102(b) as being anticipated by *Hatayama* (JP 11023486A), and objected to claim 12 as being dependent on a rejected base claim, but stated that claim 12 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### **Status of the Claims**

Claims 1, 3, 4, 8-11 and 13 have been amended.

Claims 2, 5-7, 12, and 14 have been canceled.

Claims 15-16 are in their original form.

Claims 17-23 are newly added.

### **Claim Rejections Under 35 U.S.C. § 102(b) in View of *Hatayama* (JP 09033447A)**

Claims 1-8 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Hatayama* (JP 09033447A) based on the Examiner's position that Figures 1-6 show an apparatus for detecting cracks in optical discs comprising all features of the claimed invention. Applicants respectfully traverse the Examiner's rejection. Nevertheless, in the interest of furthering prosecution, Applicants have amended independent claim 1 to state that the disc drive spins the optical disc "at a plurality of speeds," which neither reference teaches nor suggests. Accordingly, at least for this reason, Applicants submit that amended claim 1 is patentably distinguishable over *Hatayama* '447A and is therefore in condition for allowance.

With respect to claim 8, Applicants submit that *Hatayama* '447A fails to teach or suggest a transmitter or receiver mounted on the disc drive. *Hatayama* '447A discloses only transmitters and receivers that are positioned above and away from the disc drive instead of being mounted on the

disc drive itself. As such, at least for this reason, Applicants submit that claim 8 is in condition for allowance.

Further, at least because claims 3, 4, 9 and 17 each depend from amended claim 1 or claim 8, Applicants submit that these claims are also in condition for allowance. In addition, with respect to claims 3 and 17, *Hatayama* '447A fails to teach or suggest a receiver for receiving unreflected propagated light signals. As shown in Figure 5 of *Hatayama* '447A, there is no provision for detecting light unreflected by a crack. In Figure 5, the propagated light signal is emitted by a transmitter positioned above the disc, and the light signal is incident on the top disc surface at an angle, such that the light signal bounces off the top disc surface at an angle, regardless of whether any crack is present. In fact, no receiver for detecting an unreflected signal is taught by any of the Figures 1-6. The unreflected light is simply disregarded and cannot be received or analyzed. As depicted in Figure 6 of *Hatayama* '447A, only when a crack 12 is present will the light signal bounce off the top disc surface at an angle to be detected by a receiver 2b. In contrast, referring to Figure 2A of the claimed invention, when no crack is present in position 41a, the light signal 31a emitted from the transmitter 22a passes straight through the medium of the disc and is detected by receiver 24a. Thus, the system can confirm that a particular disc does not contain cracks because it is capable of receiving unreflected propagated signals emerging from the discs being tested. No such configuration for detecting unreflected light signals is taught or suggested by *Hatayama* '447A. For this additional reason, Applicants submit that dependent claims 3 and 17 are in condition for allowance.

#### **Claim Rejections Under 35 U.S.C. § 102(b) in View of *Hatayama* (JP 11023486A)**

Claims 9-11 and 13-16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Hatayama* (JP 11023486A). Claim 9 has been amended to depend from claim 8 and therefore, Applicants submit that claim 9 is now in condition for allowance. Claim 10 has been amended to clarify that light signals propagate through the interior of the disc, **along the plane of the disc**. In

contrast, *Hatayama* '486A depicts only a light signal emitted from a transmitter that is positioned above the disc such that the light signal is incident upon the disc surface at an angle. Thus, *Hatayama* '486A fails to depict any embodiment in which the light signal travels through the interior of the disc, along the plane of the disc. Accordingly, at least for this reason, Applicants submit that claim 10 is now in condition for allowance. Further, at least because claim 13 depends from now allowable claim 10, Applicants submit that claim 13 is also in condition for allowance.

The Examiner objected to claim 12 as being dependent upon rejected base claim 11, but stated that claim 12 would be allowable if rewritten in independent form. Because claim 12 depended directly from claim 11, and there were no intervening claims, Applicants have incorporated all limitations of claim 12 into claim 11. Accordingly, Applicants submit that claim 11 is now in condition for allowance. In addition, at least because claims 15-16 each depend from now allowable claim 11, Applicants submit that claims 15-16 are also in condition for allowance.

#### **New Claims**

New claims 18-23 have been added to further claim the invention. Applicants submit that at least because these claims recite a transmitter positioned below the disc, claims 18-23 are patentable over the art of record. Such a configuration is desirable since disc drive arms or other components above the disc may interfere with a reflected signal or cause space allocation concerns. Thus, the inventions of new claims 18-23 recite a transmitter positioned within previously unused space under the disc, and neither *Hatayama* '447A nor *Hatayama* '486A disclose such a configuration. Accordingly, Applicants submit that new claims 18-23 are patentably distinguishable over the art of record and are therefore in condition for allowance.

### CONCLUSION

During the course of these remarks, Applicants have at times referred to particular limitations of the claims that are not shown in the applied prior art. This shorthand approach to discussing the claims should not be construed to mean that the other claimed limitations are not part of the claimed invention. They are as required by law. Consequently, when interpreting the claims, each of the claims should be construed as a whole, and patentability determined in light of this required claim construction. Unless Applicants have specifically stated that an amendment was made to distinguish the prior art, it was the intent of the amendment to further clarify and better define the claimed invention and the amendment was not for the purpose of patentability.

Reconsideration of the claims as amended and the allowance thereof is respectfully requested. If the Examiner has any questions or comments regarding this communication, he is invited to contact the undersigned to expedite the resolution of this application.

Respectfully submitted,



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